

Remarks

Reconsideration of this Application is respectfully requested.

Claims 1-15 are pending in the application, with claim 1 being the only independent claim. Based on the following Remarks, Applicants respectfully request that the Examiner reconsider all outstanding objections and rejections and they be withdrawn.

The Claimed Invention

The claimed invention is an apparatus for removing liquids from a mixture of solids and liquids. The main components of the claimed invention are “a holding chamber,” “a conduit,” “a filter,” and “a membrane forming a substantially air-tight seal over said chamber and in substantial contact with the liquid and solids mixture.” (Claim 1). The invention operates as follows: “reduced pressure in said conduit produces a difference in pressure between said chamber and an exterior of said chamber that is substantially evenly distributed across the membrane, drawing liquid from said holding chamber through said filter into said conduit.” (Claim 1).

As set forth in paragraph 0050 of the specification, the purpose of the membrane is thus to distribute atmospheric pressure across the surface of the mixture in order to “squeeze the contents of the chamber, thus forcing water from the chamber, through the filter separating the conduit from the chamber, into the conduit and out of the chamber.” (Specification, paragraph 0050). The prior art cited by the Examiner in this case simply does not teach this aspect of the claimed invention. No reference cited by the Examiner teaches using a membrane to distribute atmospheric pressure across the surface of a liquid/solid mixture in order to squeeze the liquids out, and no combination of references cited by the Examiner teaches this aspect of the claimed invention.

Claim Rejections Under 35 U.S.C. § 103(a)

1. Rejection of claims 1-5 over U.S. Patent No. 4,632,764 in view of U.S. Patent No. 6,385,791.

The Examiner rejected claims 1-5 over U.S. Patent No. 4,632,764 (“Riise”) in view of U.S. Patent No. 6,385,791 (“Bussey”). The Applicants respectfully request that the Examiner reconsider this rejection in view of the following argument.

This rejection, and all subsequent rejections, combine the sludge-dewatering device taught in Riise with a swimming pool cover as taught in Bussey. But this combination fails for two reasons:

- (1) The swimming pool cover (as taught by Bussey) is not analogous art to the sludge dewatering art (as taught by Riise and in the present application). The goals are very different: swimming pool covers are intended to prevent evaporation and contamination of the water, whereas sludge dewatering devices are intended to dry mixtures of liquids and solids. *There is simply no reason to combine these very different devices.*
- (2) Even if these two very different devices could be combined, there is absolutely *nothing* in either reference, or in the combination of the two, that would suggest the aspect of the invention taught in claim 1 that “reduced pressure in said conduit produces a difference in pressure between said chamber and an exterior of said chamber that is substantially evenly distributed across the membrane, drawing liquid from said holding chamber through said filter into said conduit.”

First, the rejection fails because the swimming pool cover art is not analogous to the sludge dewatering art. As the Federal Circuit has held, there are two criteria “for determining whether prior art is analogous: (1) whether the art is from the same field of endeavor, regardless of the problem addressed, and (2) if the reference is not within the field of the inventor’s endeavor, whether the reference still is reasonably pertinent to the particular problem with which the inventor is involved.” *In re Clay*, 966 F.2d 656, 658-59 (Fed. Cir. 1992). Obviously, swimming pool covers are not in the same field of endeavor as sludge dewatering. Therefore, the only question is whether the swimming pool cover taught by Bussey is “reasonably pertinent to

the particular problem” of sludge dewatering that the present inventors have solved with the presently claimed invention. The Applicants respectfully submit that it is not. There is absolutely nothing in Bussey (or anywhere else) that would suggest that a swimming pool cover could be used to aid in dewatering sludges. In fact (as the Examiner even pointed out), the Bussey swimming pool cover helps to “prevent evaporation of the liquid,” a goal that is *exactly the opposite* to the goal of the presently claimed apparatus, which attempts to remove water, not to keep it in. Therefore, nothing in Bussey or Riise, or anywhere else, would suggest combining those reference in the manner the Examiner has.

Second, the rejection fails because even the combination of Bussey and Riise fails to teach the claimed invention. The Applicants concede that Bussey’s swimming pool cover is in contact with the liquid surface, and the Applicants further concede that Riise’s dewatering device employs application of a vacuum. However, what this combination fails to teach is the use of any membrane in combination with a vacuum in order to distribute atmospheric pressure across the membrane and draw the liquid out of the liquid/solid mixture, as presently claimed. Therefore, the combination of Bussey and Riise, even though these references are not properly combined, still fails to teach or suggest the claimed invention.

2. Rejection of claims 6-8 and 12-15 over U.S. Patent No. 4,632,764 in view of U.S. Patent No. 6,385,791 and U.S. Patent No. 5,277,814.

The Examiner rejected claims 6-8 and 12-15 over U.S. Patent No. 4,632,764 (“Riise”) in view of U.S. Patent No. 6,385,791 (“Bussey”) and U.S. Patent No. 5,277,814 (“Winter”). The Applicants respectfully request that the Examiner reconsider this rejection in view of the following argument.

This rejection suffers the same defects as the first, namely that it provides no motivation to combine a swimming pool cover (Bussey) with a sludge de-watering device (Riise). The addition of Winter does not cure this defect. There is nothing in Winter that discloses or suggests the use of any membrane in combination with a vacuum in order to distribute atmospheric pressure across the membrane and draw the liquid out of the liquid/solid mixture, as presently claimed. Therefore, the combination of Bussey, Riise, and Winter (even though this combination is improper, as shown above) fails to teach or suggest the claimed invention.

3. Rejection of claims 9-11 over U.S. Patent No. 4,632,764 in view of U.S. Patent No. 6,385,791, U.S. Patent No. 5,277,814 and U.S. Patent No. 5,118,427.

The Examiner rejected claims 9-11 over U.S. Patent No. 4,632,764 ("Riise") in view of U.S. Patent No. 6,385,791 ("Bussey"), U.S. Patent No. 5,277,814 ("Winter"), and U.S. Patent No. 5,118,427 ("Eichler"). The Applicants respectfully request that the Examiner reconsider this rejection in view of the following argument.

This rejection suffers the same defects as the first, namely that it provides no motivation to combine a swimming pool cover (Bussey) with a sludge de-watering device (Riise). The addition of Winter and Eichler does not cure this defect. There is nothing in Winter or Eichler that discloses or suggests the use of any membrane in combination with a vacuum in order to distribute atmospheric pressure across the membrane and draw the liquid out of the liquid/solid mixture, as presently claimed. Therefore, the combination of Bussey, Riise, Winter, and Eichler (even though this combination is improper, as shown above) fails to teach or suggest the claimed invention.

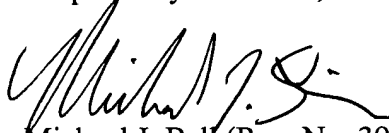
Conclusion

Applicants believe that this amendment and reply constitutes a complete response to the Office Action. Applicants further believe that they have adequately provided for any extensions of time or required fees or petitions in order to have this paper considered and/or keep the application pending. However, if extensions of time or any other fees or petitions are necessary, then applicants hereby petition, under 37 C.F.R. § 1.136(a) or any other rule, and the fees therefor (including fees for net addition of claims or other petition fees) are hereby authorized to be charged to our Deposit Account No. 08-3038, referencing docket number 02514.0007.NPUS01.

If the Examiner believes, for any reason, that personal communication will expedite prosecution of this application, the Examiner is invited to telephone Michael Stimson at (202) 383-6906.

Prompt and favorable consideration of this Amendment is respectfully requested.

Respectfully submitted,



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Date: July 2, 2004

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